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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/587,990	06/06/2000	Chris A. Hamilton	024/1	8460

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD, SEVENTH FLOOR
LOS ANGELES, CA 90025

EXAMINER

ENG, GEORGE

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/587,990

Applicant(s)

HAMILTON, CHRIS A.

Examiner

George Eng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-18 and 23-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-18 and 23-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed 3/29/2004 (paper no. 26).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 5-18 and 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogata et al. (JP 06-062400 hereinafter Ogata) in view of Maekawa et al. (US PAT. 5,884,257 hereinafter Maekawa).

Regarding claim 5, Ogata discloses a conference control system comprising means (2, figure 1) for interconnecting a plurality of videoconference stations (1a-1f, figure 1) and means for specifying who is a speaker by identifying the presence or absence of the speech (abstract). Ogata differs from the claimed invention in not specifically teaching means for determining whether a conferee is speaking based on whether visual lip movements of said conferee are reasonably consistent with an audio signal from a conference station in which said conferee is located. However, Maekawa teaches voice recognition apparatus for determining whether or not a speaker based on the voice signal and the lip movement signal, in order to prevent mis-

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recognition due to ambient noise (col. 5 line 11 through col. 7 line 37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ogata in having means for determining whether the conferee is speaking, at least in part, based on whether lip movements of said conferee are reasonably consistent with an audio signal from the conference station in which said conferee is located, as per teaching of Maekawa, in order to prevent mis-recognition due to ambient noise.

Regarding claims 6-8, Ogata disclose to identify the presence or absence of speech of each participant according to the voice level of the conference participant (abstract). Thus, a voice activity detector is obviously located at each conference stations or implemented at the conference bridge.

Regarding claim 9, Maekawa teaches to including image analysis and recognition software (4, figure 1).

Regarding claim 10, Ogata teaches to display a red rectangular marker in a window display frame to indicate who is a speaker (abstract).

Regarding claim 11, Ogata discloses a videoconference station (1a, figure 1) obviously comprising a transmitter to transmit a combined audio and video signal to a videoconference bridge and means for specifying who is a speaker by identifying the presence or absence of the speech (abstract). Ogata differs from the claimed invention in not specifically teaching means for determining whether a conferee located at the video conference station is speaking by analyzing whether visual lip movements of said conferee are substantially consistent with an audio signal from the video conference station in which said conferee is located so as to produce human speech. However, Maekawa teaches voice recognition apparatus for determining whether or not

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a speaker based on the voice signal and the lip movement signal, in order to prevent mis-recognition due to ambient noise (col. 5 line 11 through col. 7 line 37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ogata in having means for determining whether a conferee located at the video conference station is speaking by analyzing whether visual lip movements of said conferee are substantially consistent with an audio signal from the video conference station in which said conferee is located so as to produce human speech, as per teaching of as per teaching of Maekawa, in order to prevent mis-recognition due to ambient noise.

Regarding claim 12, Ogata disclose to identify the presence or absence of speech of each participant according to the voice level of the conference participant (abstract). Thus, a voice activity detector is obviously located at videoconference station.

Regarding claim 13, the limitations of the claim are rejected as the same reasons set forth in claim 9.

Regarding claims 14, Ogata discloses a conference control system comprising means (2, figure 1) for interconnecting a plurality of videoconference stations (1a-1f, figure 1) and means for visually altering an image of at least one of a plurality of remotely located conferees, who is a speaker at a particular time (abstract). Ogata differs from the claimed invention in not specifically teaching to determine whether a conferee is speaking by analyzing a consistency between lip movements of said conferee and an audio signal from a conference station in which said conferee is located such that the combination of lip movement and audio signal indicates human speech. However, Maekawa teaches voice recognition apparatus for determining whether or not a speaker based on the voice signal and the lip movement signal, in order to prevent mis-

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recognition due to ambient noise (col. 5 line 11 through col. 7 line 37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ogata in determining whether the conferee is speaking by analyzing the consistency between lip movements of said conferee and an audio signal from a conference station in which said conferee is located such that the combination of lip movement and audio signal indicates human speech, as per teaching of Maekawa, in order to prevent mis-recognition due to ambient noise.

Regarding claim 15, Ogata discloses a method of determining whether a conferee in a videoconference is speaking comprising analyzing audio signal from a conference station that indicates human speech (abstract). Ogata differs from the claimed invention in not specifically teaching to analyze whether visual lip movements of the conferee are reasonably consistent with the audio signal from the conference station in which the conferee is location so that the combination of lip movement and audio signal indicates human speech. However, Maekawa teaches a method of determining whether or not a speaker based on the voice signal and the lip movement signal, in order to prevent mis-recognition due to ambient noise (col. 5 line 11 through col. 7 line 37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ogata in analyzing whether visual lip movements of the conferee are reasonably consistent with the audio signal from the conference station in which the conferee is location, as per teaching of Maekawa, in order to prevent mis-recognition due to ambient noise.

Regarding claim 16, the limitations of the claim are rejected as the same reasons set forth in claim 15.

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Regarding claims 17-18, Ogata discloses to visually alter an image of at least one of a plurality of remotely located conferees who is a speaker at a particular time and to provide textual information to identify the conferee to other conferee if the conferee is speaking by displaying a red rectangular marker in a window display frame to indicate who is a speaker (abstract).

Regarding claim 23, Ogata discloses a videoconference system comprising a conference bridge (2, figure 1) for interconnecting a plurality of remotely located video conferencing stations (1a-1f, figure 1) comprising a voice activity detector to specify who is a speaker by identifying the presence or absence of the speech of each conferee (abstract). Ogata differs from the claimed invention in not specifically teaching the voice activity detector to determine whether the conferee in a videoconference is speaking based, at least in part, on whether lip movements of the conferee are substantially consistent with an audio signal from the conference station that indicates human speech. However, Maekawa teaches a method of determining whether or not a speaker based on the voice signal and the lip movement signal, in order to prevent mis-recognition due to ambient noise (col. 5 line 11 through col. 7 line 37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ogata in having the activity detector to determine whether the conferee in a videoconference is speaking based, at least in part, on whether lip movements of the conferee are substantially consistent with an audio signal from the conference station that indicates human speech, as per teaching of Maekawa, in order to prevent mis-recognition due to ambient noise.

Regarding claims 24-25, Ogata teaches to identify the presence or absence of the speech of each conferee for specifying who is the speaker (abstract) so that one of the ordinary skill in

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the art would recognizes Ogata in implementing the voice activity at each of the plurality of video conference stations (1a-1f, figure 1) or at the conference bridge (2, figure 1).

Regarding claim 26, the limitations of the claim are rejected as the same reasons set forth in claim 5.

Regarding claim 27, the limitations of the claim are rejected as the same reasons set forth in claim 9.

Regarding claim 28, Ogata discloses a display unit for providing visual representation of conferees participating in a videoconference (figure 2), as well as Kamata (figures 2A-2B).

Regarding claim 29, the limitations of the claim are rejected as the same reasons set forth in claim 20.

Response to Arguments

4. Applicant's arguments with respect to claims 5-18 and 23-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Katsumi (US PAT. 6,369,846) discloses a multipoint television conference system for detecting whether or not each attendee is speaking on the basis of an audio signal and video signal from each of the terminal (abstract).

6. Any response to this action should be mailed to:

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Commissioner of Patents and Trademarks

Washington D.C. 20231

Or faxed to:

(703) 872-9306 (for Technology Center 2600 only)

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, V.A., Sixth Floor (Receptionist).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Eng whose telephone number is 703-308-9555. The examiner can normally be reached on Tuesday to Friday from 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A. Kuntz, can be reached on (703) 305-4870. The fax phone number for the organization where this application or proceeding is assigned is 703-308-6306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.



George Eng
Primary Examiner
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